

WO 00/79006

PCT/US00/16722

## SEQUENCE LISTING

<110> FRED HUTCHINSON CANCER RESEARCH CENTER  
UNIVERSITY OF WASHINGTON

<120> OLIGONUCLEOTIDE ARRAYS FOR HIGH RESOLUTION HLA TYPING

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<160> 141

<170> PatentIn Ver. 2.1

<210> 1

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, Location 5-24.

<400> 1

tcacaccctc cagagcatgt

20

<210> 2

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, Location 5-24.

<400> 2

tcacatcatc cagaggatgt

20

<210> 3

<211> 20

<212> DNA

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&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, Location 5-24.

&lt;400&gt; 3

tcacacttgg cagacgatgt

20

&lt;210&gt; 4

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, Location 5-24.

&lt;400&gt; 4

tcacaccctc cagtggatgt

20

&lt;210&gt; 5

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, Location 5-24.

&lt;400&gt; 5

tcacacttgg cagaggatgt

20

&lt;210&gt; 6

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, Location 5-24.

&lt;400&gt; 6

tcacaccctc cagacgatgt

20

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<210> 7  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, Location 5-24.

<400> 7  
tcacaccctc cagaatatgt 20

<210> 8  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, Location 5-24.

<400> 8  
tcacatcatc cagagcatgt 20

<210> 9  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, Location 5-24.

<400> 9  
tcacaccatc cagaggatgt 20

<210> 10  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, Location 5-24.

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<400> 10  
tcacatcatc caggtgatgt 20

<210> 11  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, Location 5-24.

<400> 11  
tcacaccctc cagaggatgt 20

<210> 12  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 21-40.

<400> 12  
atgtacggct gcgacgtggg 20

<210> 13  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 21-40.

<400> 13  
atgtatggct gcgacctggg 20

<210> 14  
<211> 20  
<212> DNA  
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&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 21-40.

&lt;400&gt; 14

atgtttggct gcgacgtggg

20

&lt;210&gt; 15

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 21-40.

&lt;400&gt; 15

atgtaaggct gcgacgtggg

20

&lt;210&gt; 16

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 21-40.

&lt;400&gt; 16

atgtctggct gcgacgtggg

20

&lt;210&gt; 17

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 21-40.

&lt;400&gt; 17

atgtacggct gcgacctggg

20

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<210> 18  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 21-40.

<400> 18  
atgtttggct gcgacctggg 20

<210> 19  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 21-40.

<400> 19  
atgtatggct gcgacatggg 20

<210> 20  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 21-40.

<400> 20  
atgtatggct gcgacgtggg 20

<210> 21  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 41-60.

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<400> 21  
gcccgcacggg cgcctcctcc

20

<210> 22  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 41-60.

<400> 22  
gcccgcacggg cgcttcctcc

20

<210> 23  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 41-60.

<400> 23  
gccggacggg cgcctcctcc

20

<210> 24  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 61-80.

<400> 24  
gcgggcatga ccagtacgcc

20

<210> 25  
<211> 20  
<212> DNA  
<213> Artificial Sequence

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&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 61-80.

&lt;400&gt; 25

gcgggcataa ccagtagcc

20

&lt;210&gt; 26

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 61-80.

&lt;400&gt; 26

gcgggcataa ccagtagcc

20

&lt;210&gt; 27

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 61-80.

&lt;400&gt; 27

gcgggtataa ccagttcgcc

20

&lt;210&gt; 28

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 61-80.

&lt;400&gt; 28

gcgggcatga ccagtcgcc

20

&lt;210&gt; 29



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&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 61-80.

&lt;400&gt; 29

gcgggtatga ccagtccgcc

20

&lt;210&gt; 30

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 61-80.

&lt;400&gt; 30

gcgggtacca ccaggacgcc

20

&lt;210&gt; 31

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 61-80.

&lt;400&gt; 31

gcgggcatga ccagttcgcc

20

&lt;210&gt; 32

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 61-80.

&lt;400&gt; 32

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gcgggcataa ccagttcgcc

20

&lt;210&gt; 33

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 61-80.

&lt;400&gt; 33

gcgggtatga ccaggacgcc

20

&lt;210&gt; 34

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 61-80.

&lt;400&gt; 34

gcgggtataa ccagttagcc

20

&lt;210&gt; 35

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 61-80.

&lt;400&gt; 35

gcgggtatga ccagtacgcc

20

&lt;210&gt; 36

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

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<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 81-100.

<400> 36

tacgacggca aagattacat

20

<210> 37

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 3, location 81-100.

<400> 37

tacgacggca aggattacat

20

<210> 38

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 111-130.

<400> 38

gaggacctga gctcctggac

20

<210> 39

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 111-130.

<400> 39

gaggacctgc gctcctggac

20

<210> 40

<211> 20

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&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 131-150.

&lt;400&gt; 40

cgccgcggac acggcggctc

20

&lt;210&gt; 41

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 131-150.

&lt;400&gt; 41

cgcggcggac accgcggctc

20

&lt;210&gt; 42

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 131-150.

&lt;400&gt; 42

cgccgcggac aaggcggctc

20

&lt;210&gt; 43

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 131-150.

&lt;400&gt; 43

cgccgcggac acggcagctc

20

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<210> 44  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 131-150.

<400> 44  
cgccgcggac accgcggctc 20

<210> 45  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 131-150.

<400> 45  
cgcggcggac acggcggctc 20

<210> 46  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 151-170.

<400> 46  
agatcaccca gctcaagtgg 20

<210> 47  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA

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Exon Location 151-170.

&lt;400&gt; 47

agatctccca gcgcaagttg

20

&lt;210&gt; 48

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 151-170.

&lt;400&gt; 48

agatcaccca gcgcaagtgg

20

&lt;210&gt; 49

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 171-190.

&lt;400&gt; 49

gaggcggccc gtgaggcgga

20

&lt;210&gt; 50

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 171-190.

&lt;400&gt; 50

gaggcggccc gtgtggcgga

20

&lt;210&gt; 51

&lt;211&gt; 20

&lt;212&gt; DNA

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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 191-210.

<400> 51

gcagcggaga gcctacctgg

20

<210> 52

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 191-210.

<400> 52

gcaggacaga gcctacctgg

20

<210> 53

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 191-210.

<400> 53

gcagtggaga gcctacctgg

20

<210> 54

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 191-210.

<400> 54

gcagctgaga acctacctgg

20

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<210> 55  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 191-210.

<400> 55  
gcagcggaga acctacctgg 20

<210> 56  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 191-210.

<400> 56  
gcagctgaga gcctacctgg 20

<210> 57  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 211-230.

<400> 57  
agggcgagtg cgtggagtgg 20

<210> 58  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 211-230.



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<400> 58  
agggcctgtg cgtggagtgg 20

<210> 59  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 211-230.

<400> 59  
agggcctgtg cgtggacggg 20

<210> 60  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 211-230.

<400> 60  
agggcctgtg cgtggagtgc 20

<210> 61  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 211-230.

<400> 61  
agggcacgtg cgtggagtgc 20

<210> 62  
<211> 20  
<212> DNA  
<213> Artificial Sequence

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&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 211-230.

&lt;400&gt; 62

agggcctgtg cgtggagggg

20

&lt;210&gt; 63

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 211-230.

&lt;400&gt; 63

aggacctgtg cgtggagtcg

20

&lt;210&gt; 64

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 211-230.

&lt;400&gt; 64

agggcacgtg cgtggagtgg

20

&lt;210&gt; 65

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 231-250.

&lt;400&gt; 65

ctccgcagac acctggagaa

20

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<210> 66  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 231-250.

<400> 66  
ctccgcagat acctggagaa 20

<210> 67  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 257-276.

<400> 67  
ggacaagctg gagcgcgctg 20

<210> 68  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 257-276.

<400> 68  
ggacacgctg gagcgcgcgg 20

<210> 69  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 257-276.

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<400> 69  
ggagacgctg cagcgcgcgg 20

<210> 70  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 1-20.

<400> 70  
gctcccactt catgaggtat 20

<210> 71  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 1-20.

<400> 71  
gctcccactc catgaggtat 20

<210> 72  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 21-40.

<400> 72  
ttctacacct ccgtgtcccg 20

<210> 73  
<211> 20  
<212> DNA  
<213> Artificial Sequence

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&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 21-40.

&lt;400&gt; 73

ttctacaccg ccatgtcccg

20

&lt;210&gt; 74

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 21-40.

&lt;400&gt; 74

ttcgacaccg ccatgtcccg

20

&lt;210&gt; 75

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 21-40.

&lt;400&gt; 75

ttccacacct ccgtgtcccg

20

&lt;210&gt; 76

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 21-40.

&lt;400&gt; 76

ttccacaccg ccatgtcccg

20

&lt;210&gt; 77

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<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 21-40.

<400> 77  
ttctacaccg ctatgtcccg

20

<210> 78  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 21-40.

<400> 78  
ttctacaccg ccgtgtcccg

20

<210> 79  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 041-060.

<400> 79  
gcccgtccgc ggggagcccc

20

<210> 80  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 041-060.

<400> 80

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gcctggccgc ggggagcccc

20

&lt;210&gt; 81

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 041-060.

&lt;400&gt; 81

gcccggccgc ggggagcccc

20

&lt;210&gt; 82

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 061-080.

&lt;400&gt; 82

gcttcatctc agtgggctac

20

&lt;210&gt; 83

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 061-080.

&lt;400&gt; 83

gcttcatcac cgtgggctac

20

&lt;210&gt; 84

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

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<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 061-080.

<400> 84

gcttcattgc agtgggctac

20

<210> 85

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 061-080.

<400> 85

gcttcacgc agtgggctac

20

<210> 86

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Probe HLA  
Location 081-100.

<400> 86

gtggacgaca cccagttcgt

20

<210> 87

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Probe HLA  
Location 081-100.

<400> 87

gtggacggca cccagttcgt

20

<210> 88

<211> 20



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&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Location 081-100.

&lt;400&gt; 88

gtggacgaca cgctgttcgt

20

&lt;210&gt; 89

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Location 081-100.

&lt;400&gt; 89

gtggacgaca cgcagttcgt

20

&lt;210&gt; 90

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 111-130.

&lt;400&gt; 90

agcgacgcca cgagtccgag

20

&lt;210&gt; 91

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 111-130.

&lt;400&gt; 91

agcgacgccg cgagtccgag

20

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<210> 92  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 096-115.

<400> 92  
ttcgtgcggt tgcacagcga 20

<210> 93  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 096-115.

<400> 93  
ttcgtgaggt tgcacagcga 20

<210> 94  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 121-140.

<400> 94  
cgagtccgag agaggagccg 20

<210> 95  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA

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Exon Location 121-140.

&lt;400&gt; 95

cgagtccgag gatggcgccc

20

&lt;210&gt; 96

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: PCR Probe HLA

Exon Location 121-140.

&lt;400&gt; 96

cgagtccgag gacggagccc

20

&lt;210&gt; 97

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: PCR Probe HLA

Exon Location 121-140.

&lt;400&gt; 97

cgagtccgag gaaggagccg

20

&lt;210&gt; 98

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: PR Probe HLA

Exon Location 141-160.

&lt;400&gt; 98

cgggcgccat ggatagagca

20

&lt;210&gt; 99

&lt;211&gt; 20

&lt;212&gt; DNA

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&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PR Probe HLA  
Exon Location 141-160.

&lt;400&gt; 99

cgggcgccgt gggtaggagca

20

&lt;210&gt; 100

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PR Probe HLA  
Exon Location 141-160.

&lt;400&gt; 100

cgggcgccgt ggatagagca

20

&lt;210&gt; 101

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 161-180.

&lt;400&gt; 101

ggaggggccg gaatattggg

20

&lt;210&gt; 102

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 161-180.

&lt;400&gt; 102

agaggggccg gaggattggg

20

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<210> 103  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 161-180.

<400> 103  
ggaggggccc gagcattggg 20

<210> 104  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 161-180.

<400> 104  
ggaggggccc gagtattggg 20

<210> 105  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 181-200.

<400> 105  
accggaacac acagatctac 20

<210> 106  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 181-200.

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<400> 106  
accggaacac acagatcttc 20

<210> 107  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 181-200.

<400> 107  
accgggagac acagatctcc 20

<210> 108  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 181-200.

<400> 108  
accggaacac acagatctgc 20

<210> 109  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 181-200.

<400> 109  
accggaacac acagatctcc 20

<210> 110  
<211> 20  
<212> DNA  
<213> Artificial Sequence

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&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 181-200.

&lt;400&gt; 110

accgggagac acggaacatg

20

&lt;210&gt; 111

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 181-200.

&lt;400&gt; 111

accgggatac acagatctcc

20

&lt;210&gt; 112

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 181-200.

&lt;400&gt; 112

accgggagac acagatctgc

20

&lt;210&gt; 113

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 181-200.

&lt;400&gt; 113

accgggagac acagaagtac

20

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<210> 114  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 181-200.

<400> 114  
acgggggagac acggaacatg 20

<210> 115  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 181-200.

<400> 115  
accgggagac acagatcttc 20

<210> 116  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR Probe HLA  
Exon Location 201-220.

<400> 116  
aaggcccagg cacagactga 20

<210> 117  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR Probe HLA  
Exon Location 201-220.



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&lt;400&gt; 117

aagaccaaca cacagactta

20

&lt;210&gt; 118

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence:PCR Probe HLA  
Exon Location 201-220.

&lt;400&gt; 118

aaggcctccg cgcagactta

20

&lt;210&gt; 119

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence:PCR Probe HLA  
Exon Location 201-220.

&lt;400&gt; 119

aaggccaagg cacagactta

20

&lt;210&gt; 120

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence:PCR Probe HLA  
Exon Location 201-220.

&lt;400&gt; 120

aaggccaagg cacagactga

20

&lt;210&gt; 121

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

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&lt;220&gt;

<223> Description of Artificial Sequence:PCR Probe HLA  
Exon Location 201-220.

&lt;400&gt; 121

aagcgccagg cacagactga

20

&lt;210&gt; 122

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence:PCR Probe HLA  
Exon Location 201-220.

&lt;400&gt; 122

aagaccaaca cacagactga

20

&lt;210&gt; 123

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 216-235.

&lt;400&gt; 123

actgaccgag agagcctgcg

20

&lt;210&gt; 124

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 216-235.

&lt;400&gt; 124

acttaccgag agaacctgcg

20

&lt;210&gt; 125

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<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 216-235.

<400> 125  
acttaccgag agagcctgcg 20

<210> 126  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 216-235.

<400> 126  
actgaccgag aggacctgcg 20

<210> 127  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 216-235.

<400> 127  
acttaccgag aggacctgcg 20

<210> 128  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 216-235.

<400> 128

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actgaccgag tgagcctgcg

20

&lt;210&gt; 129

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 216-235.

&lt;400&gt; 129

actgaccgag tgggcctgcg

20

&lt;210&gt; 130

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 216-235.

&lt;400&gt; 130

actgaccgag agaacctgcg

20

&lt;210&gt; 131

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 231-250.

&lt;400&gt; 131

ctgcgcaccg cgctccgcta

20

&lt;210&gt; 132

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

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<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 231-250.

<400> 132  
ctgcggatcg cgctccgcta 20

<210> 133  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 231-250.

<400> 133  
ctgcggaccc tgctccgcta 20

<210> 134  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 231-250.

<400> 134  
ctgcggaacc tgctccgcta 20

<210> 135  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 231-250.

<400> 135  
ctgcggaacc tgcgcggcta 20

<210> 136  
<211> 20

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&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 251-270.

&lt;400&gt; 136

ctacaaccag agcgaggacg

20

&lt;210&gt; 137

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon Location 251-270.

&lt;400&gt; 137

ctacaaccag agcgaggccg

20

&lt;210&gt; 138

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probes HLA  
Exon 2.

&lt;400&gt; 138

gctcccactc catgaggtat

20

&lt;210&gt; 139

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probes HLA  
Exon 2.

&lt;400&gt; 139

cggcctcgct ctggtttag

20

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&lt;210&gt; 140

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 2.

&lt;400&gt; 140

acccggtttc attttcagtt g

21

&lt;210&gt; 141

&lt;211&gt; 18

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: PCR Probe HLA  
Exon 2.

&lt;400&gt; 141

cccactgccc ctggtacc

18